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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,737	09/29/2003	Hyo Azuma	0020-5181P	6749
2292	7590	10/11/2006		
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER MAPLES, JOHN S	
			ART UNIT 1745	PAPER NUMBER
DATE MAILED: 10/11/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/671,737	<b>Applicant(s)</b> AZUMA, HYO	
	<b>Examiner</b> John S. Maples	<b>Art Unit</b> 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2006 and 18 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-9 ~~is/are~~ are pending in the application.
- 4a) Of the above claim(s) 9 is/~~are~~ withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-8 ~~is/are~~ are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. Claim 9 is withdrawn from further consideration pursuant to 37 CFR

1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-4 and 6-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. (New Rejection)

Applicant has used the expression "or less" in each of claims 1 and 8 in reciting the amount of the binder in the negative electrode. There is no support for this language in the originally filed specification. There is support however, for zero amount of binder in the negative electrode and for respective amounts of 2 and 5 percent.

Claims 2-4 and 6-7, dependent on claim 1, fall therewith.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-4, 6-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kameda et al.-US 6,632,569 (Kameda) in view of both JP-2002-025612 ('612) and Kasamatsu et al.-US 6,420,070. (Kasamatsu)

Kameda sets forth in the Abstract and in column 4, lines 2-51; column 6, lines 33-52; column 12, lines 41-59; column 14, lines 48-60; column 15, lines 6-22 and Table I a lithium ion secondary battery having all of the claimed features of the negative electrode including a carbonaceous material having a spacing  $d_{0002}$  less than 0.337 thus meeting the claimed subject matter. It is noted that with the amended claim language in the last line of each of independent claims 1 and 8 setting forth the language "or less", no binder is required in the applied references to meet the claimed subject matter. Column 15 of Kameda also sets forth a spiral wound battery. Kameda teaches all of the presently claimed subject matter except for the specific amount of the vinylene carbonate and for the box-shaped battery. The '612 patent discloses a non-aqueous graphite anode battery having the claimed amount of vinylene carbonate in the electrolyte-see claims 1 and 5, for example, therein. To have included in the electrolyte of Kameda the amount of vinylene carbonate as taught in '612 would have been obvious for the known outstanding output properties of the said battery with such an amount of this particular type of electrolyte.

It is noted that Kameda provides for different shapes of the battery therein as set forth in column 15, lines 18-19. Kasamatsu sets forth in column 14, lines 31-34 a flat shaped for a lithium ion battery. To have formed the battery of Kameda in a flat, box shape as shown in Kasamatsu would have been obvious to one of ordinary skill in this

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art because Kameda provides for various different shapes and Kasamatsu provides a box shape. This shape would also allow for ease of stacking of the batteries of Kameda.

Applicant's arguments have all been considered but are not deemed persuasive. Applicant has argued that there is no reason to combine the above references except for reconstructing applicant's teachings. The examiner respectfully disagrees. For the above noted reasons presented in the preceding paragraphs, the references are properly combinable. It is noted that applicant has not specifically argued why the examiner's position for combining the references is improper.

Finally, it is noted that the remainder of the arguments relate to the amount of the binder present, however, this argument is deemed moot in view of applicant not requiring any binder in the negative electrode due to the present language in the independent claims of "or less".

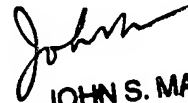
6. An English language translation of the submitted Chinese search report is requested in response to this office action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John S. Maples whose telephone number is 571-272-1287. The examiner can normally be reached on Monday-Thursday, 6:15-3:45, and every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
JOHN S. MAPLES  
PRIMARY EXAMINER

JSM/9-30-2006